

## **REMARKS**

Applicants respectfully request entry of the foregoing amendments at least because the amendments raise no new issues requiring further search or consideration and would place the application in condition for allowance.

Claims 1 and 11 are currently being amended. Support for this amendment can be found at least in the present specification on page 3, lines 1-11.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-12 are now pending in this application.

## **Examiner Interview**

Applicants appreciate the courtesies extended by Examiner Tran in the personal examiner interview of January 16, 2004. An Examiner Interview Summary describing the interview is of record in the present application. Applicants' representative and Examiner Tran discussed the amendments to claims 1 and 11, and the differences between those claims and the disclosure of U.S. Patent No. 5,939,028 to Bennett. The differences between claims 2 and 12 and the disclosure of U.S. Patent No. 5,776,417 to Frost et al. was also discussed.

## **Rejections under 35 U.S.C. §§ 102 and 103**

Claims 1, 7 and 8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,939,028 to Bennett et al. (hereafter "Bennett"). Claims 2-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,776,417 to Frost et al. (hereafter "Frost '417"). Claim 9 stands rejected under 35 U.S.C. § 103 as being unpatentable over Bennett in view of Frost (JP 409103645) (hereafter "Frost '645"). Claims 10 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bennett in view of U.S. Patent No. 6,029,441 to Mizuno et al. (hereafter "Mizuno"). Claim 12 stands rejected under 35 U.S.C. §

103 as being unpatentable over Frost '417 in view of Mizuno. Applicants respectfully traverse these rejections for at least the following reasons.

Independent claims 1 and 11 have been amended to require that the H<sub>2</sub>O trap be disposed upstream of and close to the CO oxidation catalyst so dimensioned that adsorption heat and condensation heat of H<sub>2</sub>O contribute to a rise in temperature of the CO oxidation catalyst. This arrangement where the heat of the H<sub>2</sub>O trap contributes to the rise in temperature of the catalyst provides advantages. Bennett fails to disclose this feature of claims 1 and 11, or suggest its advantages. With respect to the relative position of the water trap and the CO oxidation catalyst, Bennett discloses two configurations: (1) where the water trap is upstream of the CO oxidation catalyst (col. 8, lines 23-25), and (2) where the water trap is admixed with the CO oxidation catalyst in a layered arrangement (col. 8, lines 25-28). In contrast to claims 1 and 11, Bennett discloses no arrangements where the water trap is disposed both upstream of and close to the CO oxidation catalyst so dimensioned that adsorption heat and condensation heat of H<sub>2</sub>O contribute to a rise in temperature of the CO oxidation catalyst.

In configuration (1), Bennett is silent as to the distance between the CO oxidation catalyst and the H<sub>2</sub>O trap. Thus, Bennett does not disclose the H<sub>2</sub>O trap to be disposed upstream of and close to the CO oxidation catalyst, and clearly does not disclose the H<sub>2</sub>O trap to be disposed upstream of and close to the CO oxidation catalyst so dimensioned that adsorption heat and condensation heat of H<sub>2</sub>O contribute to a rise in temperature of the CO oxidation catalyst.

With respect to configuration (2), Bennett does not disclose that the H<sub>2</sub>O trap be disposed upstream of the CO oxidation catalyst as required by claims 1 and 11. Even in the embodiment of Bennett where the water trap is admixed with the CO oxidation catalyst in a layered arrangement, the water trap cannot be reasonably interpreted as being upstream of the CO oxidation catalyst. Moreover both claims 1 and 11 require that the H<sub>2</sub>O trap be supported separately from the CO oxidation catalyst. The embodiment of Bennett with the layered arrangement cannot be interpreted as disclosing that the water trap and the CO oxidation

catalyst are supported separately, because the layers are on the same support. Thus, for at least the above reasons, claims 1 and 11 are patentable over Bennett.

Frost '645 was cited for allegedly disclosing a HC trap disposed upstream of a water trap but fails to cure the deficiencies of Bennett at least because Frost '645 does not suggest that the water trap should be disposed upstream of the CO oxidation catalyst in the Bennett device. In fact Frost '645 specifically discloses in the SOLUTION that the water trap is arranged on the downstream side of the catalyst.

***Claims 2 and 12***

Claim 2 recites an arrangement where an HC trap is disposed upstream of an H<sub>2</sub>O trap, and at the same time a CO oxidation catalyst and the H<sub>2</sub>O trap are coated on a support. In arguing that Frost '417 discloses an HC trap disposed upstream of a water trap, the Office Action cites to col. 7, lines 9-10 and 24-25. This section refers to independent claim 1 and dependent claim 5 of Frost '417. This section of Frost '417, however, does not disclose an arrangement where an HC trap is disposed upstream of an H<sub>2</sub>O trap, and at the same time a CO oxidation catalyst and the H<sub>2</sub>O trap are coated on a support. Claim 5 of Frost '417, which depends on claim 4, and ultimately on claim 1, requires the catalyst be positioned downstream of the HC trap, a first water trap upstream of the HC trap, and a second water trap positioned downstream of the catalyst. Thus in this arrangement the first water trap and second water trap are respectively positioned upstream and downstream of the catalyst, and both of these water traps are separated from the catalyst and therefore are not coated on a support with the catalyst, as required in claim 2.

Frost '417 does disclose that the water trap and the HC trap may be of the same material (col. 2, lines 16-17). Nowhere, however, does Frost '417 disclose that a water trap functions as both a water trap and an HC trap, and Nelson can not be properly interpreted as falling within the scope of claim 2.

In claim 12 the HC trap, which is disposed upstream of a secondary air supply, must also be disposed upstream of the H<sub>2</sub>O trap. Further the CO oxidation catalyst and the H<sub>2</sub>O

trap are coated on a support. Thus, claim 12 is patentable over Frost '417 for at least the same reasons as claim 2.

Mizuno was cited for allegedly disclosing an HC trap upstream of a secondary air supply unit, and does not cure the deficiencies of Frost '417 or Bennett discussed above.

For at least the reasons given above, applicants submit that all of the independent claims, 1, 2, 11 and 12, are patentable over the art cited in the rejection of the claims. The dependent claims are patentable for at least the same reasons as their respective independent claims, as well as for further patentable features recited therein. Accordingly applicants respectfully request that the rejection of the claims under 35 U.S.C. §§ 102 and 103 be withdrawn.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date January 22, 2004

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